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Silicon Valley Bank

Q2

2020

State of the Markets

Silicon Valley Bank's Inside View of the Global Innovation Economy

State of the Markets: Second Quarter 2020

Q2 2020

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Unprecedented Times

Since our last update, it seems everything has changed.

I'll be frank. Due to COVID-19, the global economy has rapidly deteriorated, and the tech ecosystem is bracing for impact. Lossmaking companies with limited runway are at risk of failure. Volatility reigns.

This all said, here are two reassuring caveats: first, the VC ecosystem has weathered recessions before, and tech tends to enjoy strong relative performance during the recovery. This will be especially true in segments with direct relevance to the pandemic such as remote collaboration software and HealthTech.

Second, many of the trends that seem to be emerging due to the virus actually predate it. Examples here include the decline of growth-at-all-costs and supply chain shifts.

The innovators we serve remain adaptable and optimistic, but also realistic: we are in for a pullback, and we will lead the way out.

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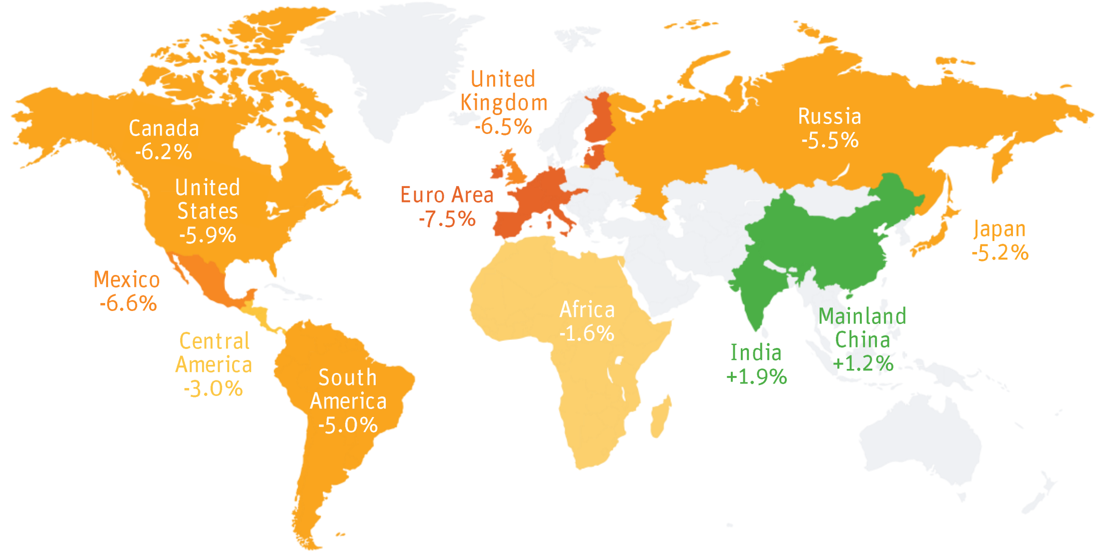
Macro

Don’t Poke the Bear

Global Downturn

As COVID-19 spreads across the globe, markets have fallen fast and growth has come to a halt. The market decline has been steeper than any before, reaching bear market territory in less than a month — marking the worst first quarter in history. Economists have slashed growth projections as businesses close and employees are laid off. Tech has weathered the storm well — even benefitting from policies like shelter-in-place. When we do enter recovery, tech should benefit from structural changes such as remote work, accelerated cloud demand and more.

2020 GDP Estimates Post-COVID-19



Historical Bear Markets

Bear	S&P 500	Tech	Length (Months)	Length to -20%
Gulf War	-20%	-31%	3	3
Dot-Com	-49%	-82%	31	12
GFC[1]	-57%	-53%	17	9
COVID-19[2]	-34%	-31%	1	0.7
Median[3] ex Current	**-34%**	**-53%**	**18**	**7**

Tech Performance Post-Bear

Relative Performance of Tech Out of a Bear			
Bear	**+3M**	**+6M**	**+12M**
Post-Gulf War	+8%	+9%	-6%
Post-Dot-Com	+23%	+16%	+44%
Post-GFC	+6%	+11%	+15%

Note: 1) Global Financial Crisis 2) Assumes market trough of 3/23/20. 3) Includes data from bear markets 1929-2009, some of which are not shown.
Source: International Monetary Fund, S&P Capital IQ and SVB analysis.

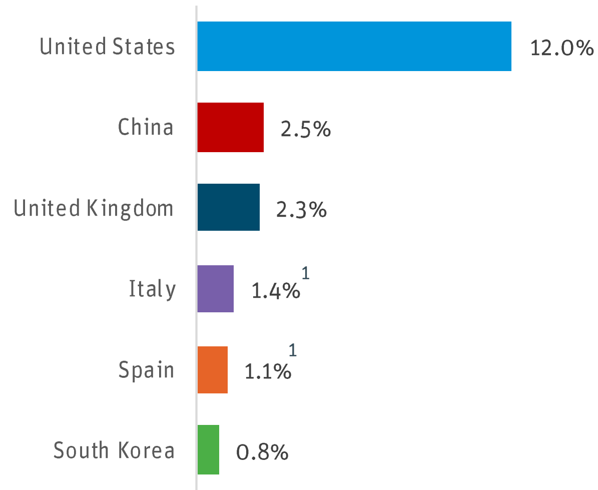
March Sees Global Fiscal Surge

As economic activity has slowed amidst COVID-19's international spread, many governments have introduced significant fiscal stimulus.

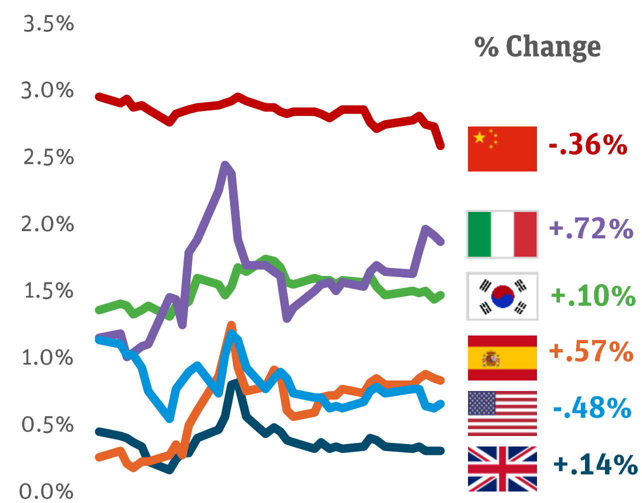
As fiscal positions have worsened, countries have seen their sovereign debt yields increase as investors have fled to safer U.S. Treasuries.

This is in spite of the dire consequences that the $2T U.S. package may have on the federal budget deficit. As the package includes loan programs, some of this spending will be recouped in future years.

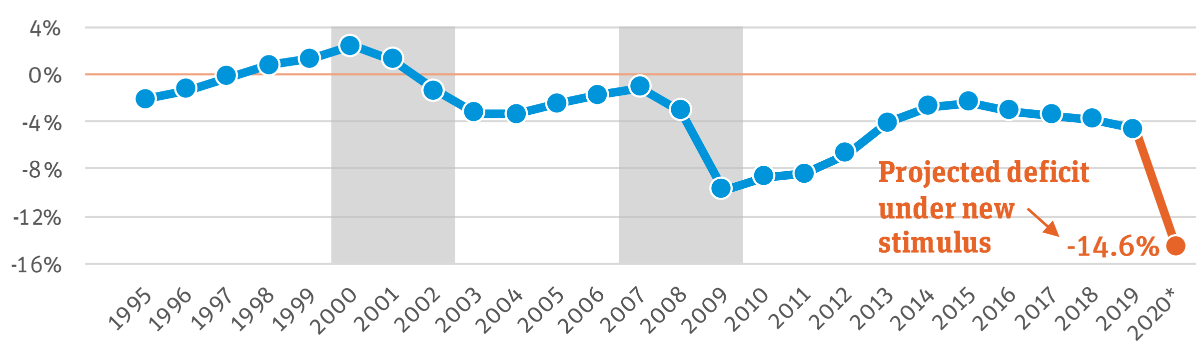
COVID-Related Stimulus (% GDP)



10Y Gov Debt Yields Since February



U.S. Budget Deficit (% GDP)[2]



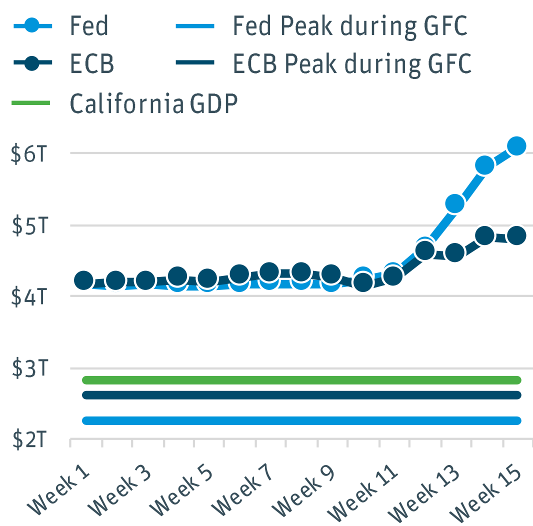
Note: 1) Excludes state-backed credit guarantee schemes, which are substantial in Italy and Spain.
2) Assumes no change in revenues resulting from recession and tax policy changes; therefore conservative.
Source: International Monetary Fund, S&P Capital IQ, Congressional Budget Office and SVB analysis.

Monetary Policy Pushes the Limit

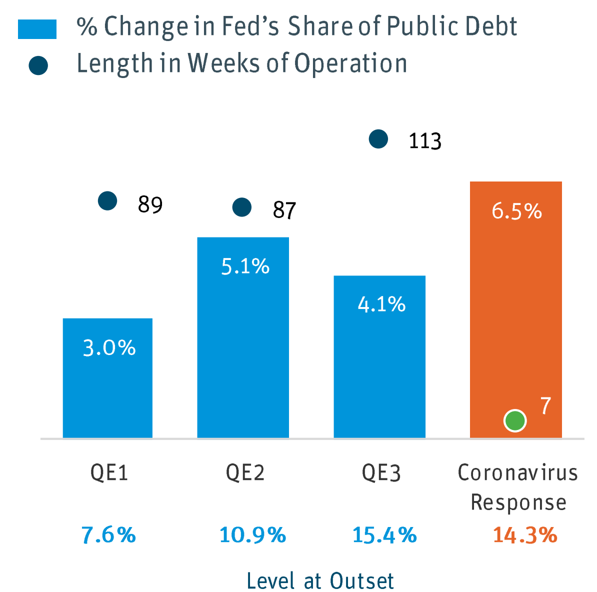
Major central banks have taken bold and decisive action to prop up the economy, ramping up asset purchasing and adding new types of securities to their balance sheets, such as corporate bonds and nonfinancial commercial paper. The ECB and BoJ have been restrained on rate cuts, as policy rates in those economies have already been negative for years.

Research has shown that monetary policy can be less effective when interest rates are already low. There is evidence, however, that it can still be effective in alleviating acute financial crises.

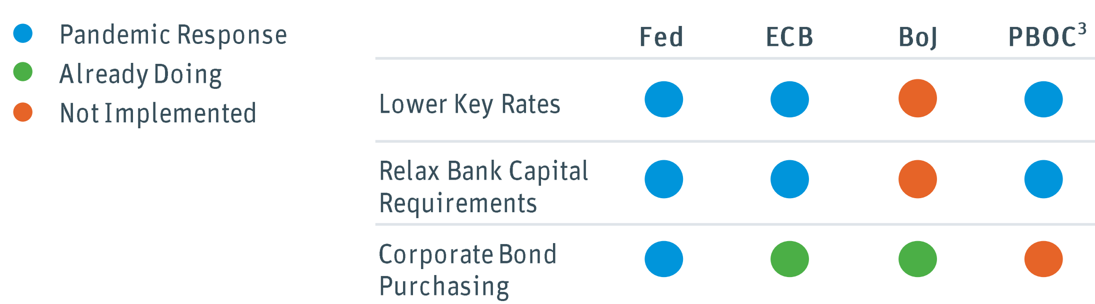
2020 Fed and ECB Balance Sheets, USD[1]



Fed-Held Share of Public Debt During Stimulus Operations[2]



Major Central Bank Policies

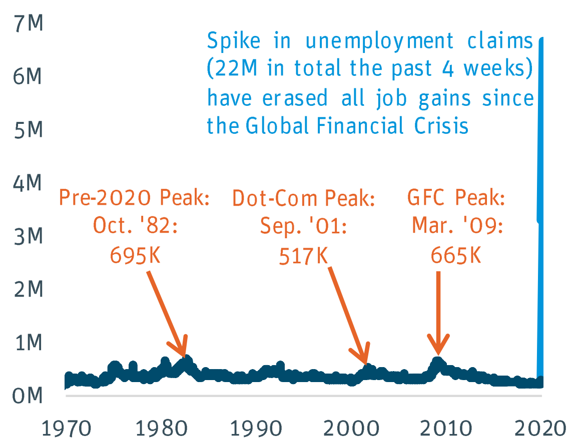


Note: 1) ECB figures converted from euros to dollars based on historical exchange rates.
2) QE = Quantitative Easing. 3) PBOC = People's Bank of China.
Source: European Central Bank, Federal Reserve, International Monetary Fund, Bureau of Economic Analysis and SVB analysis.

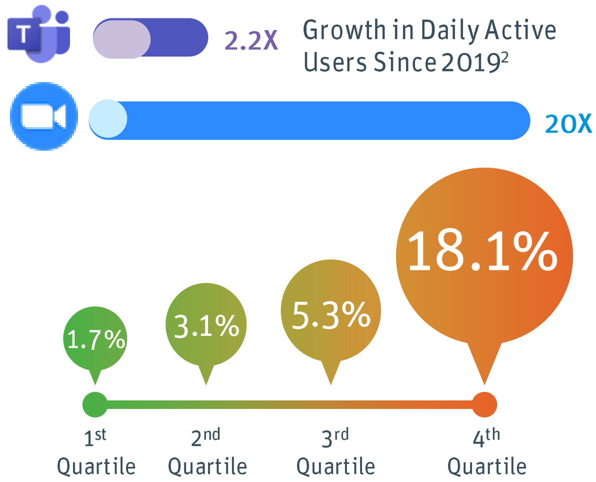
Homeward Bound

As the "Great Lockdown" continues, cost reductions including layoffs and furloughs are rippling through startups. Even those that have recently raised are using this as an opportunity to right size their costs. As most companies adjust to the remote working model and implement new tools and procedures to maintain productivity, fixed costs like rent begin to look discretionary. Rent alone is not a sizeable cost, yet when adding insurance, utilities, perks and more, it can start to add up. Companies that help facilitate remote work, such as Zoom and Microsoft Teams, have seen tremendous growth in daily active users in 2020.

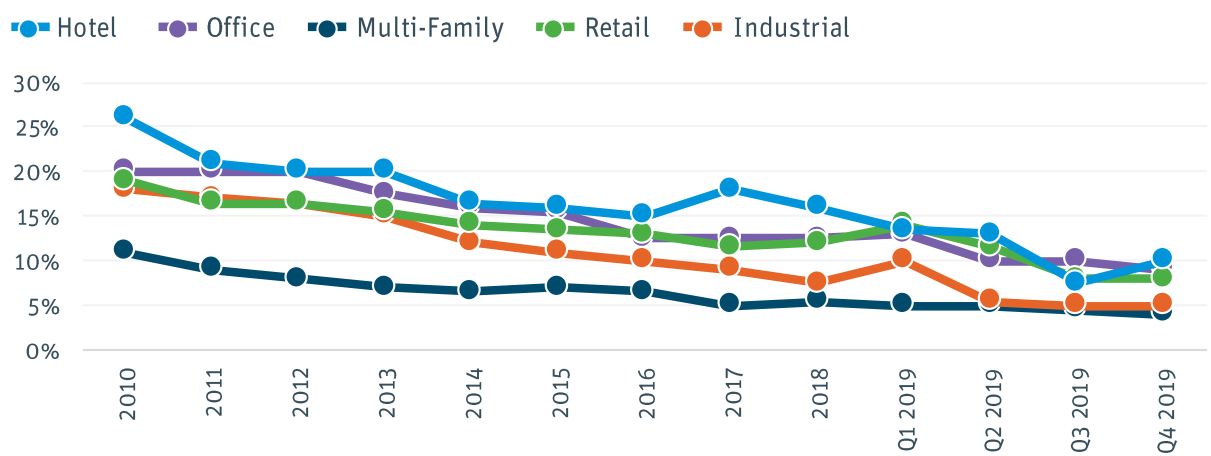
Weekly Unemployment Claims



Rent Expense as % of Opex[1]



Commercial Property Vacancy Rates



Note: 1) Includes growth startups who have partial rent and operating expenses from 2017–2020. 2) Dec. '19 for Zoom and Nov. '19 for Microsoft.
Source: SVB Proprietary Data, National Realtors Association, Department of Labor, CNBC and SVB analysis.

Spotlight

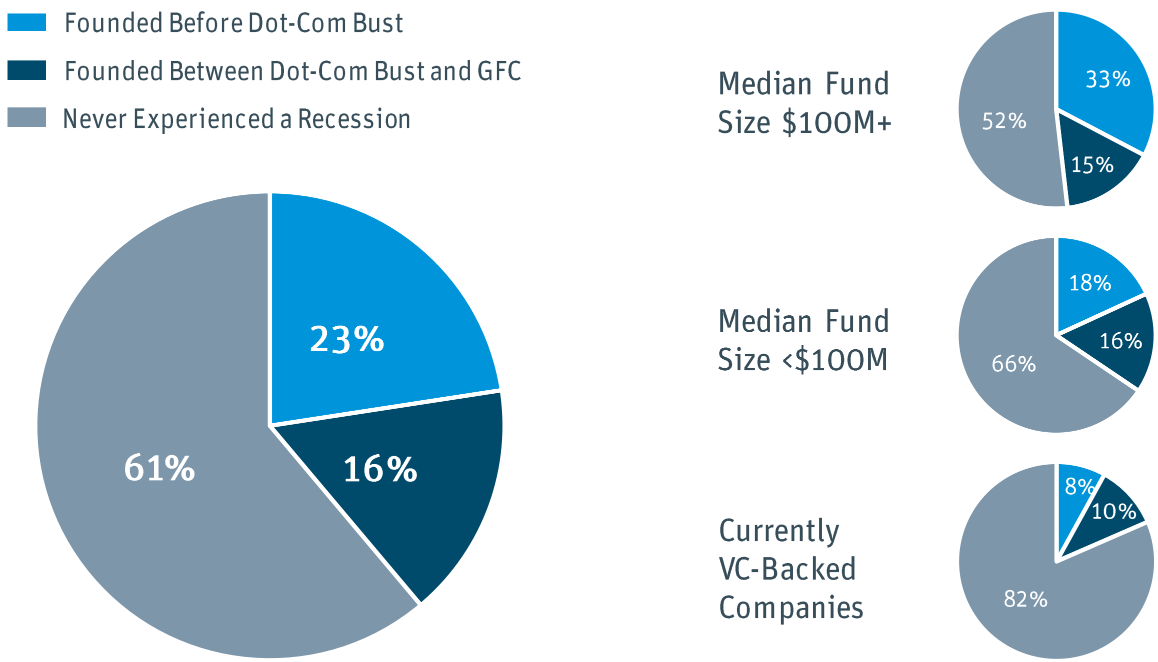
Looking Back at Past Downturns

The Expansion Generation of VCs

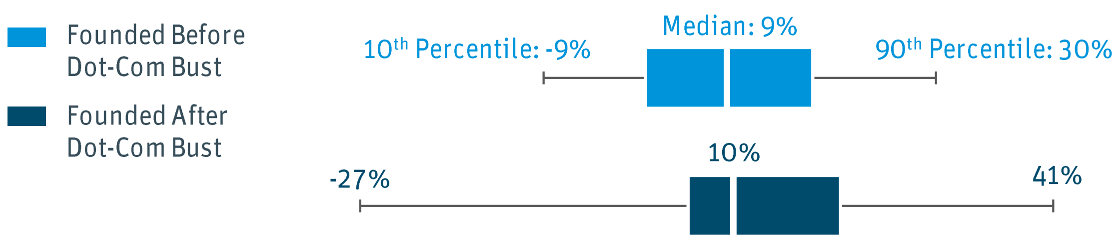
In venture capital (VC), experience matters, especially in tougher environments. During the GFC, managers who had been active during the Dot-Com bust saw far less performance variance than those who hadn't, suggesting a better risk-adjusted return. This could be due to well-developed firm-level investment strategies or better deal access.

Today, the majority of active VC firms has never seen a recession. This is less the case for firms that raise larger funds. More experienced firms might be more risk averse in a recessionary environment.

Active[1] VC Firms' Recession Experience



Firm Performance During GFC



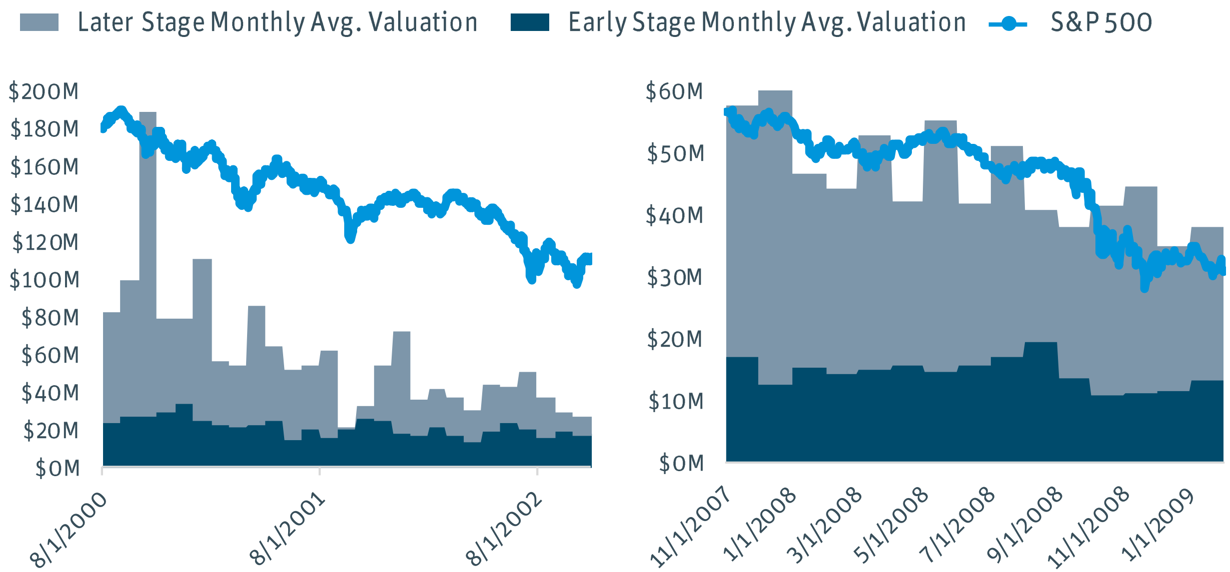
Note: 1) Active funds defined as those having closed a deal since 1/1/2019.
Source: PitchBook, Preqin and SVB analysis.

Venturing through Downturns

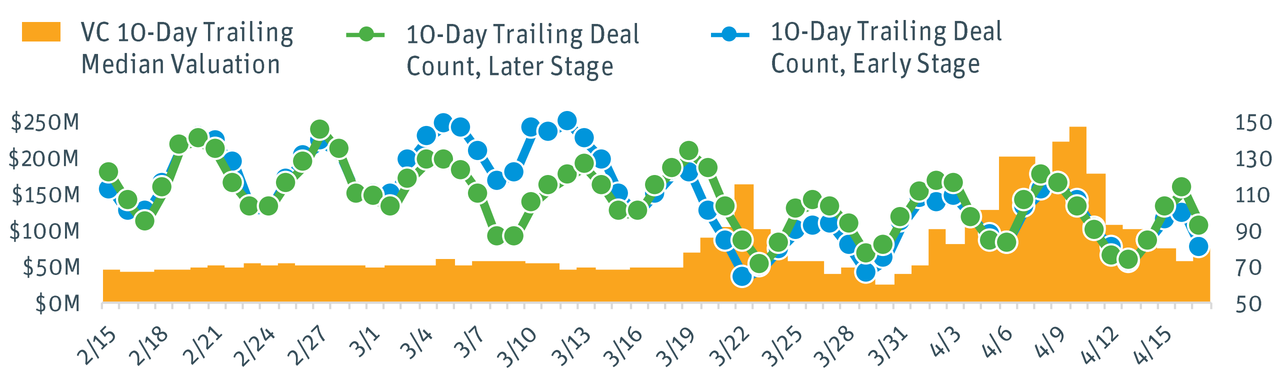
The link between public markets and VC valuations is somewhat nebulous, but the last two recessions coincided with corrections in the private markets. This time around, valuations are yet to fall meaningfully, perhaps due to larger deals already in the works closing.

We expect the late stage to take a larger hit; 38% of late stage deals involve nontraditional investors, such as asset managers and private equity firms, that have more sensitivity to public market performance. Furthermore, later stage companies are more comparable to public peers for benchmarking valuations.

Valuation Trends in Past Bear Markets



Recent VC Activity

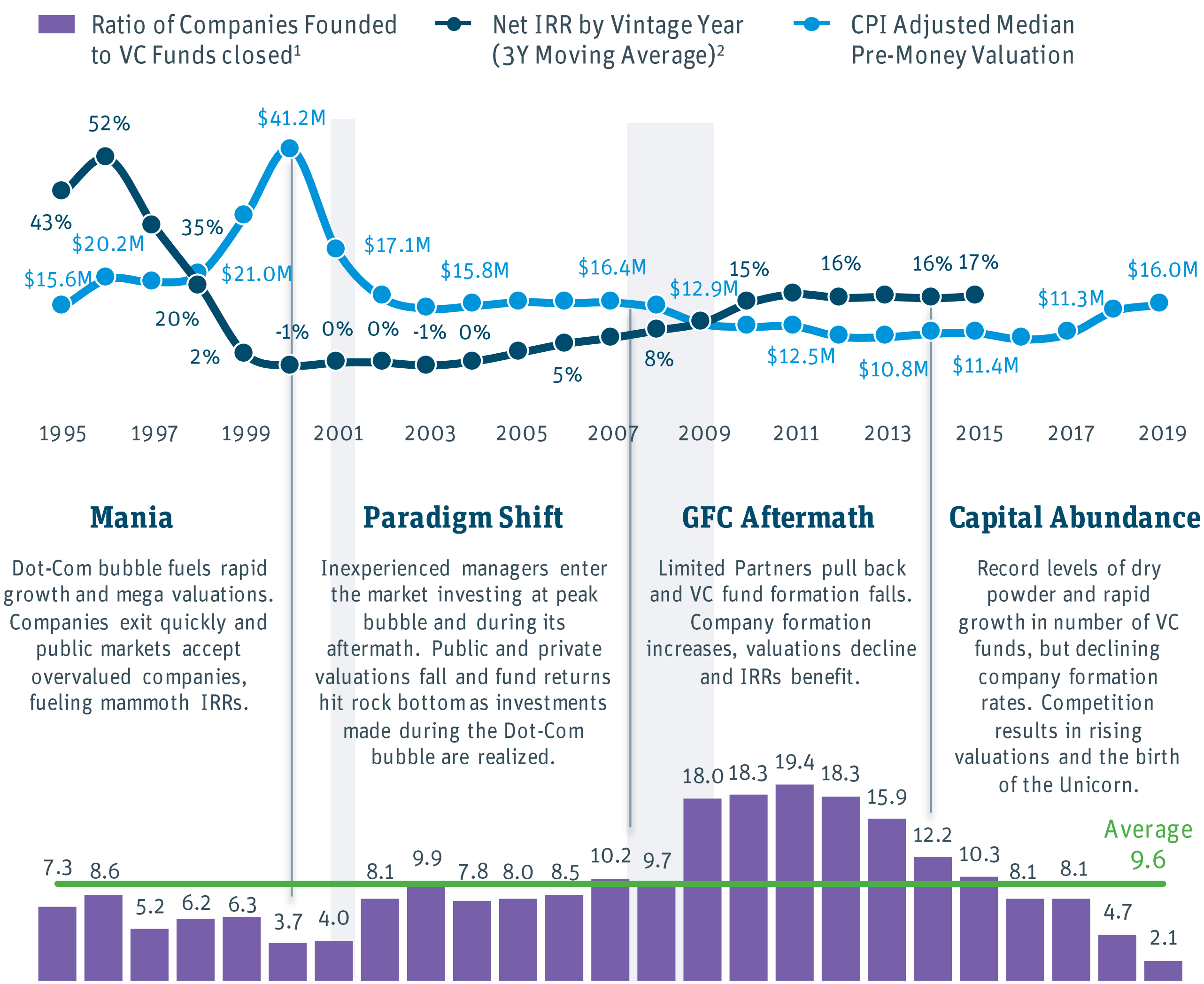


Source: PitchBook, S&P Capital IQ and SVB analysis.

Performance through Past Cycles

Companies founded per VC fund closed is a leading indicator of startup valuations and VC performance. When the companies founded per fund closed is below average, entrepreneurs hold more power, which is observed in more favorable terms and higher valuations. Since 2014, company formation has declined and the number of VC firms has increased, which gives entrepreneurs more power. We expect the current environment to put downward pressure on valuations once activity picks up, with weaker growth expectations for startups used as the rationale for the drop.

Key Indicators of VC Performance through Past Cycles

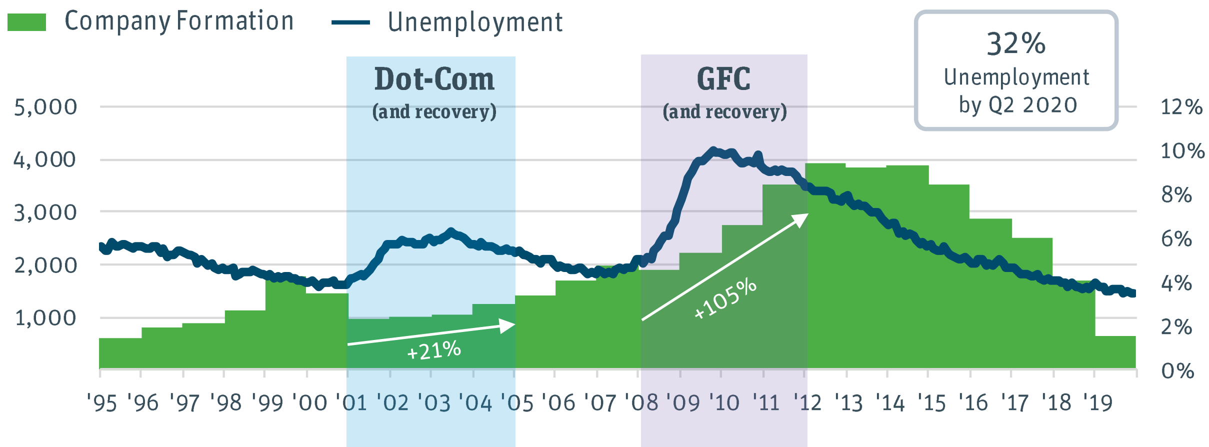


Note: 1) Companies founded in 2018 and 2019 is likely to increase as data is updated.
2) IRR data through 2015 to catch funds that have harvested returns.
Source: Preqin, PitchBook, Bureau of Labor Statistics and SVB analysis.

Adversity Drives Innovation

With high unemployment leading to an ample supply of talented workers, lower opportunity costs and the potential to ride the next wave of economic growth, recessions provide a great opportunity for entrepreneurs. With unemployment reaching ~10% post-Global Financial Crisis, annual company formation reached a record high. Around 41% of today's unicorns were founded during or in the aftermath of the GFC[1]. Today, 9% of the constituents of the Nasdaq were founded between 2008 and 2012.

U.S. VC-Backed Company Formation and Unemployment Cycles



- Recession fueled by frothy private valuations and public market speculation: **Direct impact on tech/innovation**
- Shock to innovation economy led to slower recovery

- **Great companies founded and funded**
- Company formation fueled by decreased opportunity costs and ample talent supply

- Housing-led recession: **Minimal impact on the innovation economy**
- High unemployment drove rapid company formation between 2008 and 2012

Founded amid Dot-Com Crash

Top Tech Startups Founded in GFC[2]

35%
Serial Entrepreneurs

50%
Former Tech

Formed amid GFC

Notes: 1) Global Financial Crisis 2) Top public, formerly VC-backed tech companies by market capitalization.
Source: PitchBook, Bureau of Economic Analysis, S&P Capital IQ, St. Louis Federal Reserve and SVB analysis.

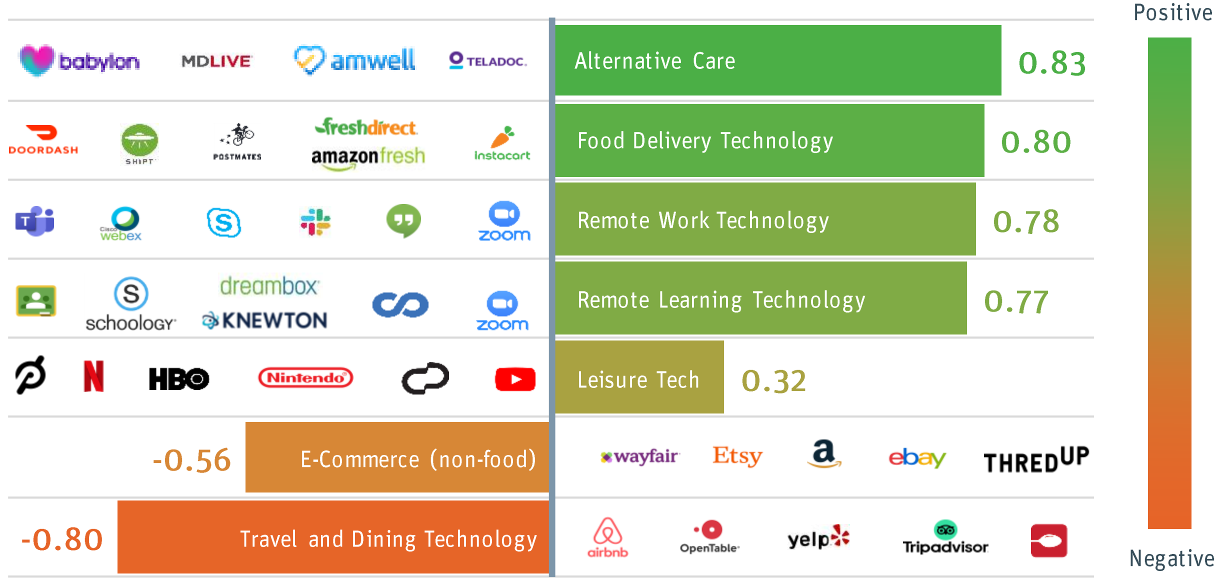
Companies

Shelter in Place

The Remote Pandemic

Despite the current economic climate, some industries are getting a boost. Consumer interest in remote healthcare technology saw the biggest boost, followed by food delivery, remote work, and remote learning. As organizations realize the gains to efficiency from going remote, structural changes from decreased business travel to working from home will likely persist after the pandemic subsides. These changes will hurt airlines and hotels, while enterprise software companies and remote healthcare companies will benefit.

Consumer Interest in Sector Correlation to Coronavirus[1]



Formerly VC-Backed Tech Company Performance[2]

Cloudflare
Mkt. Cap.: $6B
LPV: $2B
Perf.: +20%

Zoom
Mkt. Cap.: $44B
LPV: $1B
Perf.: +55%

Fitbit
Mkt. Cap.: $2B
LPV: $0.3B
Perf.: -4%

Zscaler
Mkt. Cap.: $8B
LPV: $1B
Perf.: -10%

Teladoc
Mkt. Cap.: $12B
LPV: $0.2B
Perf.: +44%

Everbridge
Mkt. Cap.: $4B
LPV: $0.2B
Perf.: +13%

Peloton
Mkt. Cap.: $7B
LPV: $4B
Perf.: -14%

Slack
Mkt. Cap.: $14B
LPV: $7B
Perf.: -8%

Note: 1) Google trends correlation of coronavirus and sector defined using key search terms and notable companies.
2) Performance from peak (2/19/20) to trough (3/23/20).
Source: S&P Capital IQ, PitchBook, Google Trends and SVB analysis.

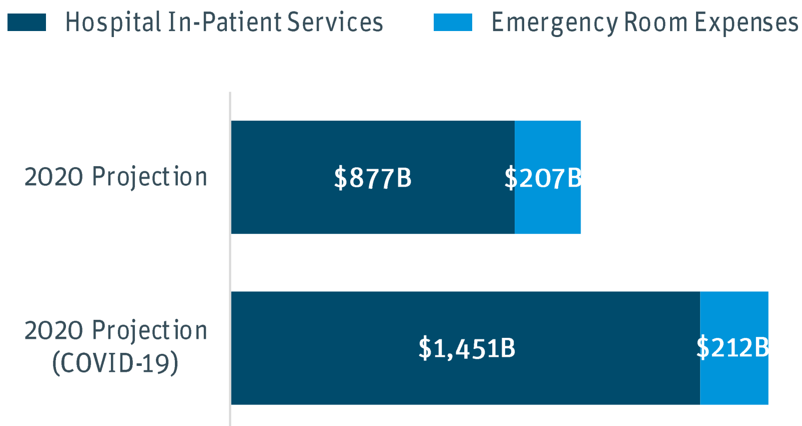
COVID-19 Increases In-Patient Services

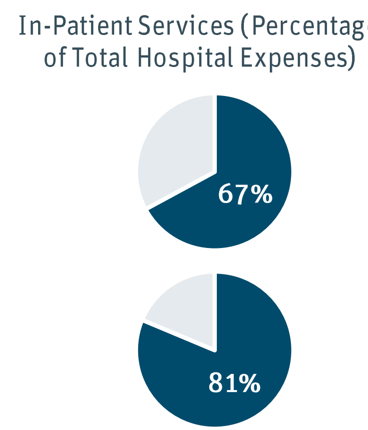
The surge in hospital care due to COVID-19 is projected to cause in-patient expenses to rise by 65% due to the high cost of treating these patients.

As healthcare costs rise, the wasteful spending within the system grows with the Provider Operations and Alternative Care sectors seeing the largest increases.

Outside these sectors, Healthcare Navigation companies can also help curb the additional healthcare expenditure. For example, companies such as Grand Rounds and Pager are helping route patients through the healthcare system.

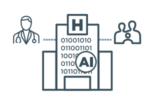
The Rise in U.S. Hospital Expenses[1] Due to COVID-19





Additional Wasteful Expenditure Drives Opportunities for HealthTech Sectors[2]

Provider Operations



COVID-19 Waste: $183B

Private Notable Companies

Caver, HealthReveal, PatientPing, Viz.ai, abacus insights, innovaccer, REDOX, Welltok

Alternative Care

COVID-19 Waste: $12B

Private Notable Companies

98point6, BRIGHT.MD, Doctor On Demand, Push Doctor, AbleTo, Doctolib, KRY, QARE

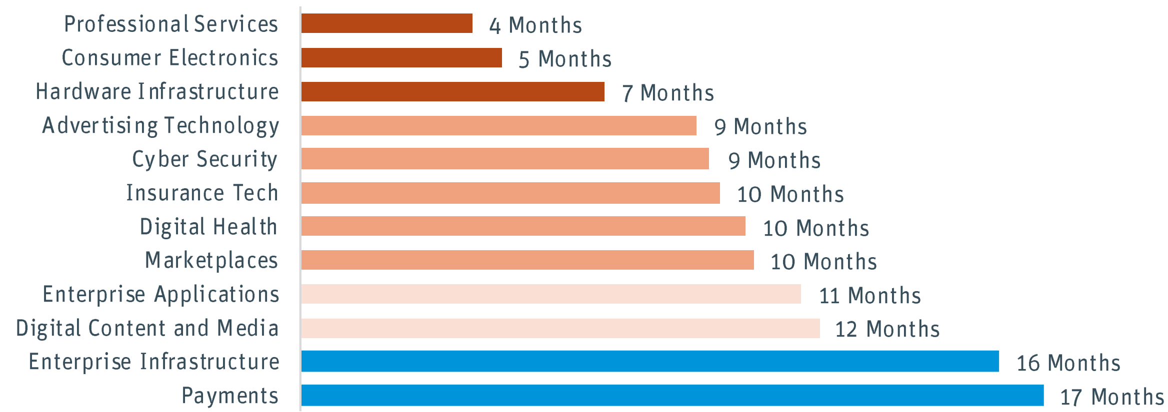
Notes: 1) Hospital expenses do not include the projected decrease in elective surgical procedures.
2) Detailed definitions of SVB HealthTech sectors can be found in SVB's HealthTech Report.
Source: CMS, Fair Health, PitchBook and SVB analysis.

Runway as Recession Immunity

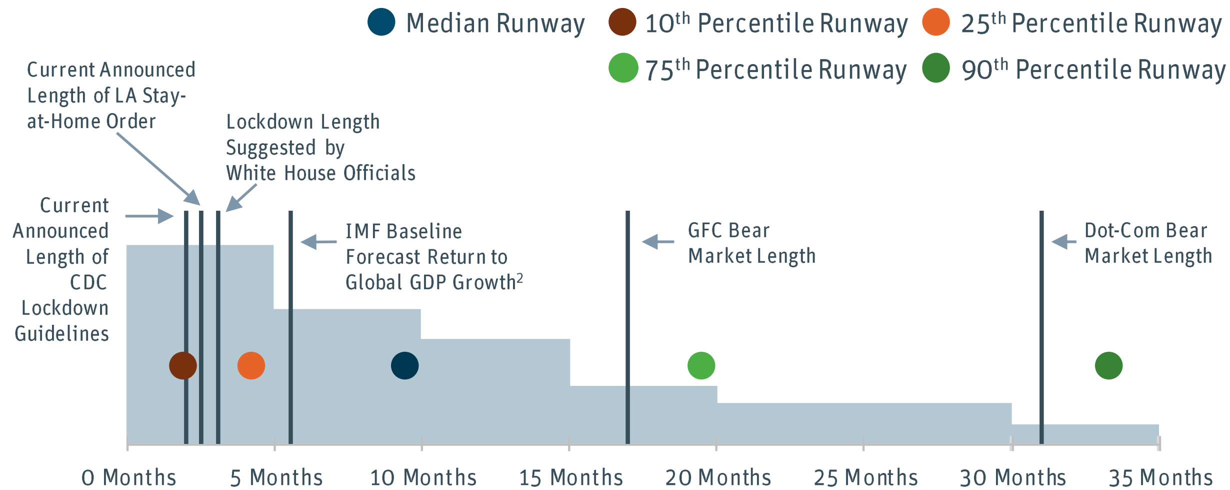
As the global economy falls into recession, the VC funding market is unlikely to be spared. Absent funding, unprofitable companies' days are numbered. Some segments have a healthier cash cushion and thus a better chance of riding out a VC cooldown.

Of course, there is the ever-present risk of a pandemic resurgence. Though the International Monetary Fund expects growth to pick up in the back half of 2020, it underscored in its April World Economic Outlook that there is great uncertainty around this baseline.

Median Runway of Lossmaking Companies by Segment[1]



Lossmaking Company Runway over Potential Timelines



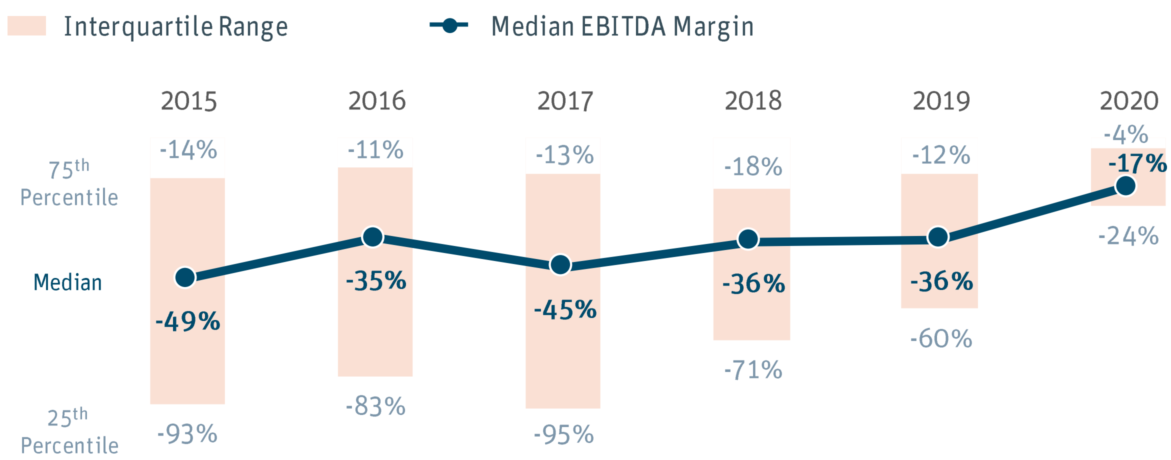
Notes: 1) Segment list is inexhaustive. Only includes subsectors for which data was sufficient. 2) Represents midpoint of earliest quarter with expected global growth above zero.
Source: SVB Proprietary Data, International Monetary Fund, S&P Capital IQ and SVB analysis.

COVID Pushes the Bar Higher Still

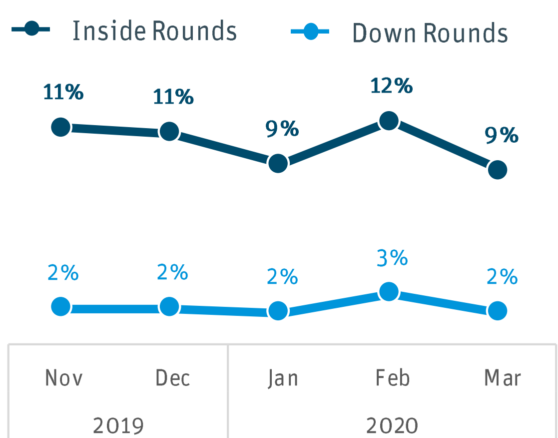
It is useful to consider the pandemic-related pullback in context – there was already a sea change taking place which shifted investor focus from explosive growth to good unit economics. This is especially visible for the cohort of companies that is more mature. Deal activity for this cohort, though limited this year, has shown a growing preference for stronger margins – even if "stronger" only means less negative.

This raising of the bar is closely related to a general decline in deal activity, which we have observed in 2020 thus far.

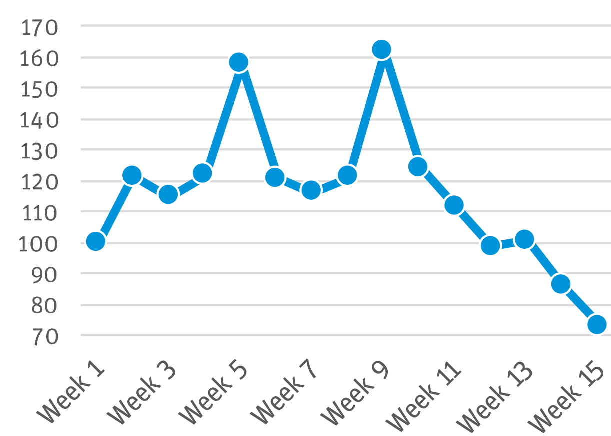
EBITDA Margins of Later Stage Companies at Time of Funding



Down & Inside[1] Rounds (% All)



SVB Deal Activity Index[2]

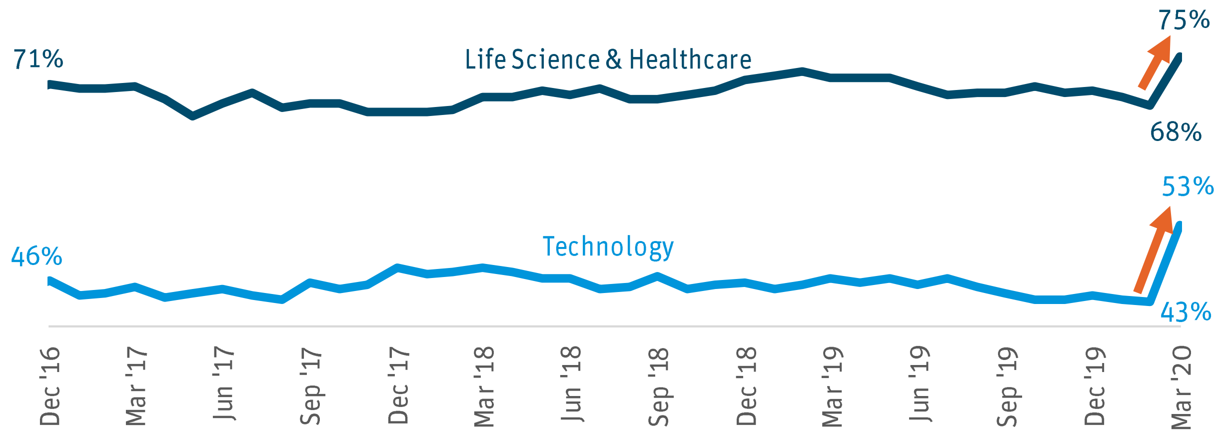


Note: 1) Inside round defined as one in which the lead investor is a follow-on investor.
2) Index derived from proprietary SVB data.
Source: Pitchbook, SVB Proprietary Data and SVB analysis.

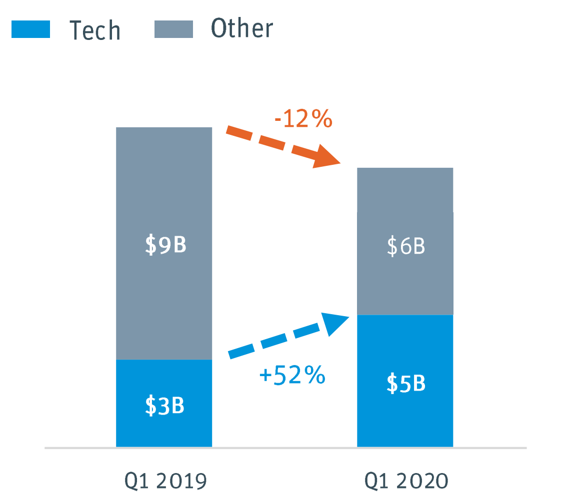
(Don't) Burn Baby Burn

With many preparing for a prolonged downturn, venture capitalists are recommending founders slash expenses, suspend non-essential projects and revise their forecasts. They're also advising portfolio companies take out or draw down debt to extend their cash runway for at least 18 to 24 months. Convertible debt issuers, amidst uncertainty around COVID-19, tensions with Iran and an impending election, tapped the public markets, thereby taking advantage of the open window to access the market before it dramatically slowed in the second week of March.

SVB Debt Utilization Rates[1] by Banking Group



Convertible Debt Issuance



Largest Deals in 2020[2]

$1,750M March	$1,000M January 2nd Convert
$1,000M March	$750M April
$1,000M March 3rd Convert	$750M April 1st Convert
$1,000M February 2nd Convert	$535M April 4th Convert
EXACT SCIENCES $1,000M February	$525M February 1st Convert

Note: 1) Data through 3/31/2020 2) Data through 4/15/2020
Source: SVB Proprietary Data, PitchBook, S&P Capital IQ and SVB analysis.

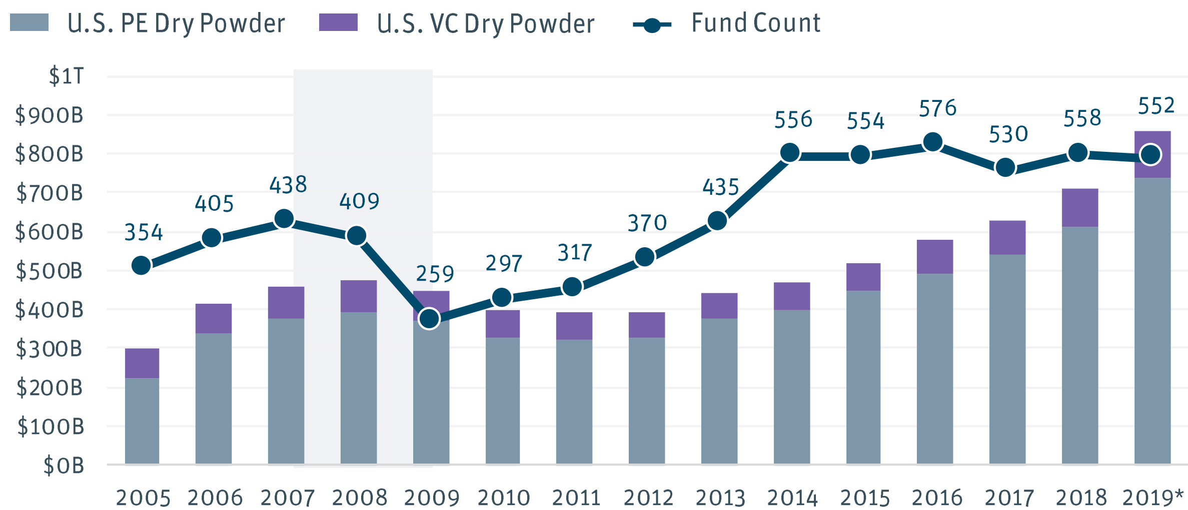
Investors

Taking Stock

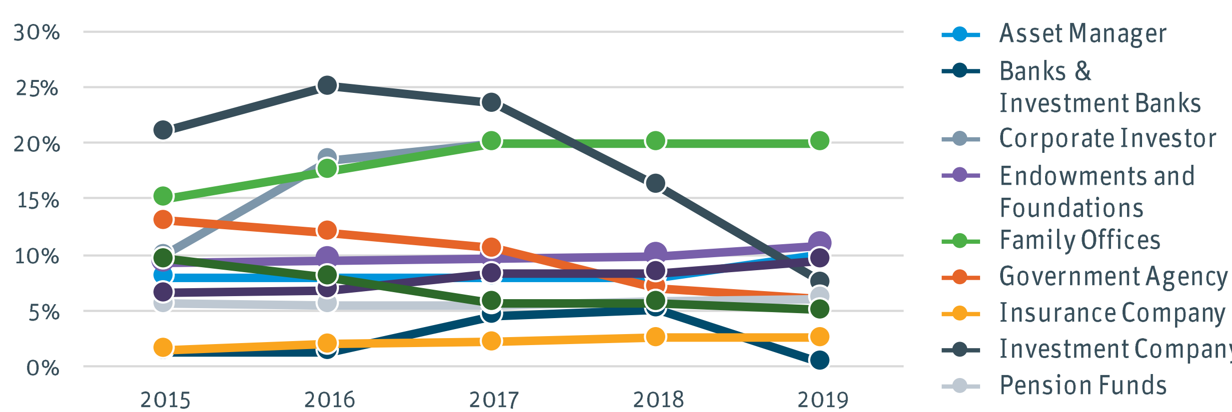
Plenty in the Coffers, for Now

Combined, Venture Capital and Private Equity dry powder is at a record high. However, during the GFC dry powder started to moderate as new fund creation dropped by ~40%. For Limited Partners, dips in the public markets will trigger a rebalancing of portfolios, similar to what occurred in 2009, which, in turn, could lower allocations to PE and VC. Allocations from the biggest contributors, such as pensions, endowments and foundations, had been rising, but we now expect these to fall, leading to a tougher fundraising environment in 2020.

U.S. Investor Dry Powder and Fund Vintage[1]



Limited Partner Allocation to U.S. PE and VC

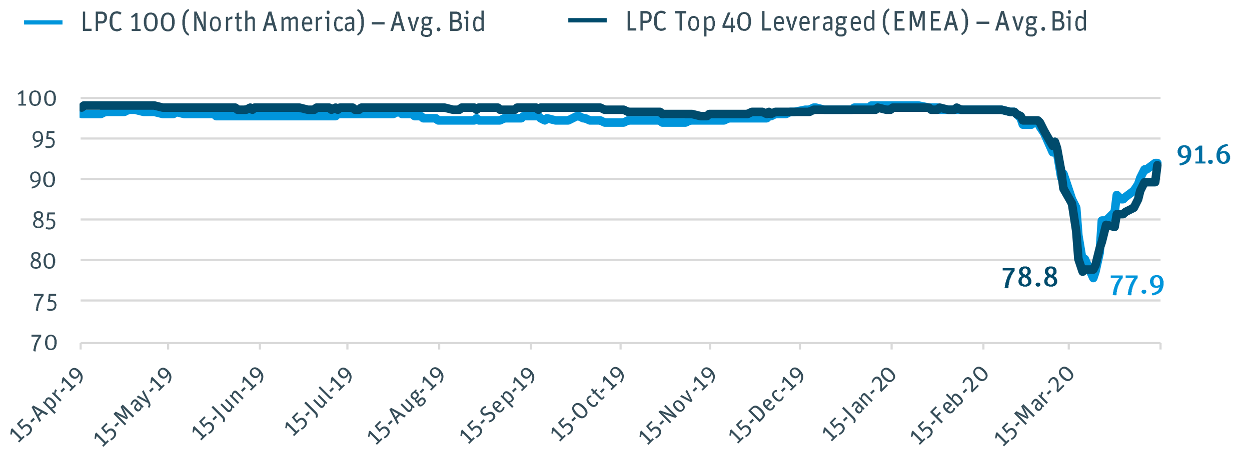


*Dry powder as of 6/30/2019.
Note: 1) Fund count includes private equity and venture capital.
Source: Preqin, PitchBook and SVB analysis.

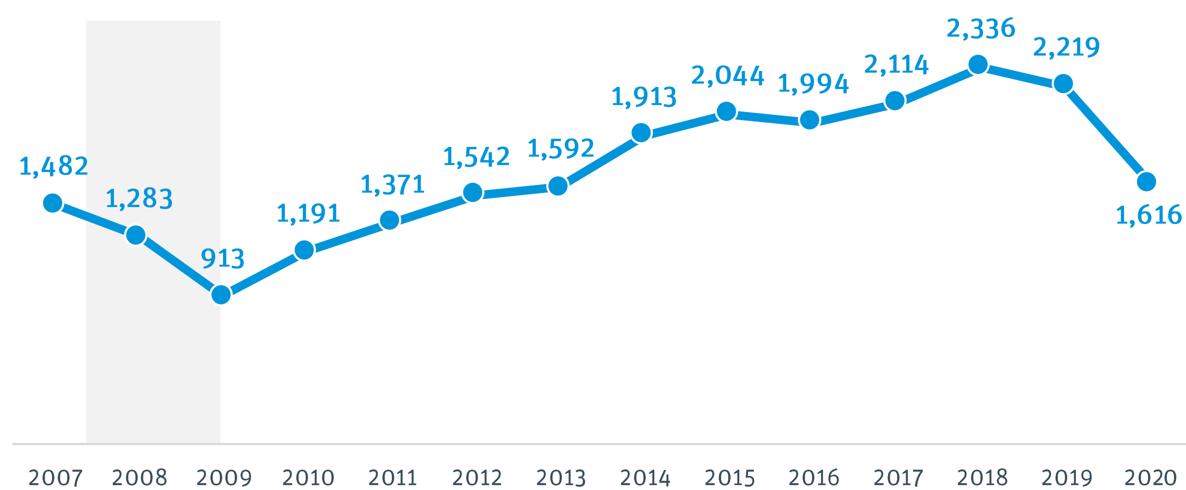
Time for a PE Turnaround?

March marked the first month since 2008 that the institutional leveraged loan market closed with no new issuances. This was driven in large part by M&A auctions breaking down as lenders struggled to underwrite and price risk amid unprecedented uncertainty. As loan prices in the secondary market plummeted, lenders struggled to justify buying new issuances. Meanwhile, PE firms will be eager to deploy at a discount to pre-pandemic prices. Only when the leveraged loan market stabilizes will sponsors find lenders more willing to transact.

Leveraged Loan Average Bids in Secondary Trading



U.S. PE Quarterly Deal Volume[1]

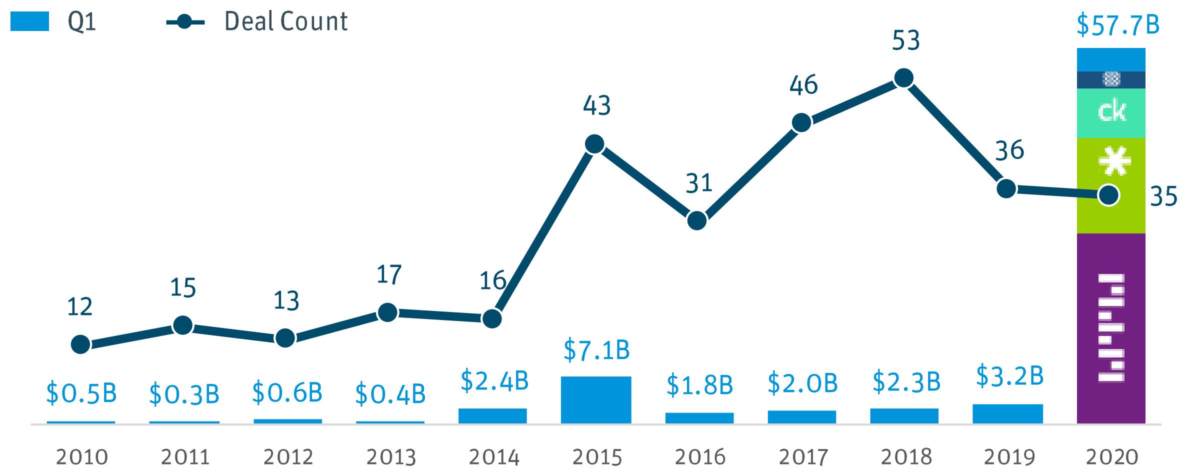


Note: 1) Quarterly average deals by year.
Sources: S&P Capital IQ, Refinitiv LPC, PitchBook, Preqin and SVB analysis.

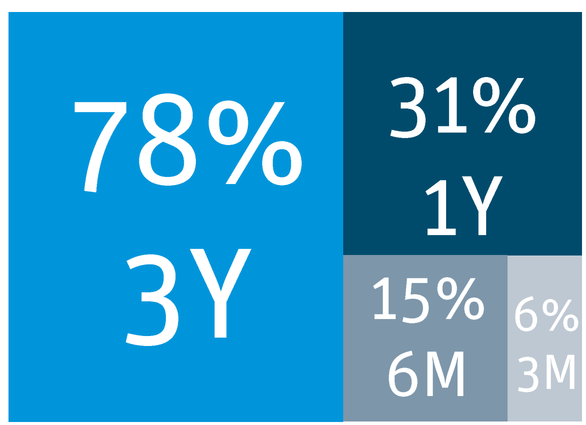
FinTech Surge Overshadowed

Before the COVID-19 outbreak and the ensuing bear market grabbed the headlines, FinTech had its best first quarter ever as VC-backed companies like Credit Karma and Plaid got scooped up by larger public FinTechs. With a tougher fundraising environment ahead and healthy public FinTech cash balances, FinTech startups will likely consider M&A a more appealing exit opportunity. Additionally, larger public FinTechs will be looking to enhance their digital platforms, increase their capabilities and diversify their customer base once things start to get back to normal.

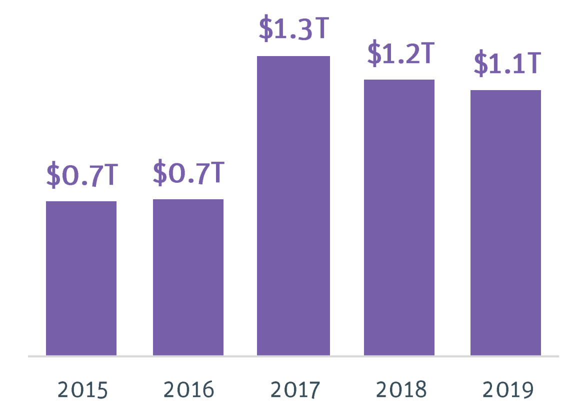
U.S. FinTech M&A since 2010[1]



Percentage of FinTechs Raised



Public Financial Services[2] Cash Balances



Note: 1) 2020 data as of 3/31/2020. 2) Public Financial Services include all S&P 500 Financials firms and select Info Tech firms with a financial presence.
Source: PitchBook, S&P Capital IQ and SVB analysis.

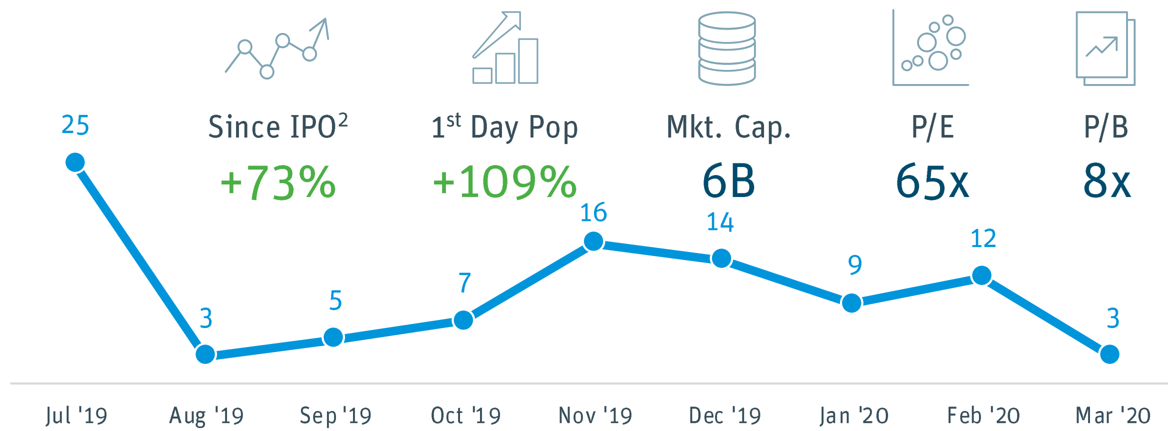
International

Changes Abroad

A STAR Burns Brighter

As China attempts to rebound from COVID-19, it has a few tailwinds. China recently revised its Securities Law, expanding registration-based IPOs to all exchanges, which was a major bottleneck. This not only increases the number of places companies can list, but also the potential pool of companies who could list, including non-tech firms. If China's economy rebounds well and investors believe financial market reform holds, we could see Chinese companies that are listed on U.S. or HK-based exchanges re-list on the mainland exchanges.

STAR Market Stats[1] & Number of Listed Companies by Month



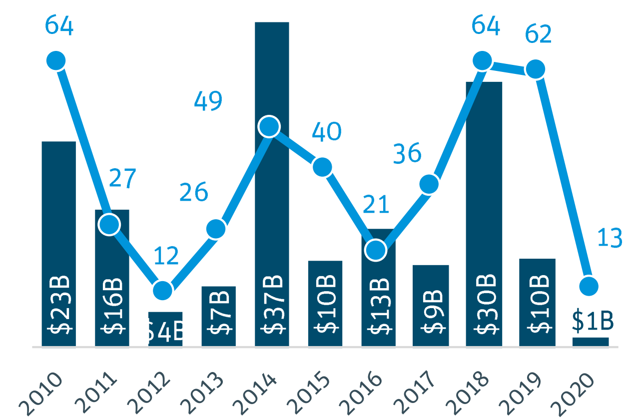
Overview of Rules Changes

Expands Registration-Based IPOs

Stricter Information Disclosures Requirements

Tougher Penalties for Market Violations

CH Firms Listing on HK & U.S. Exchanges



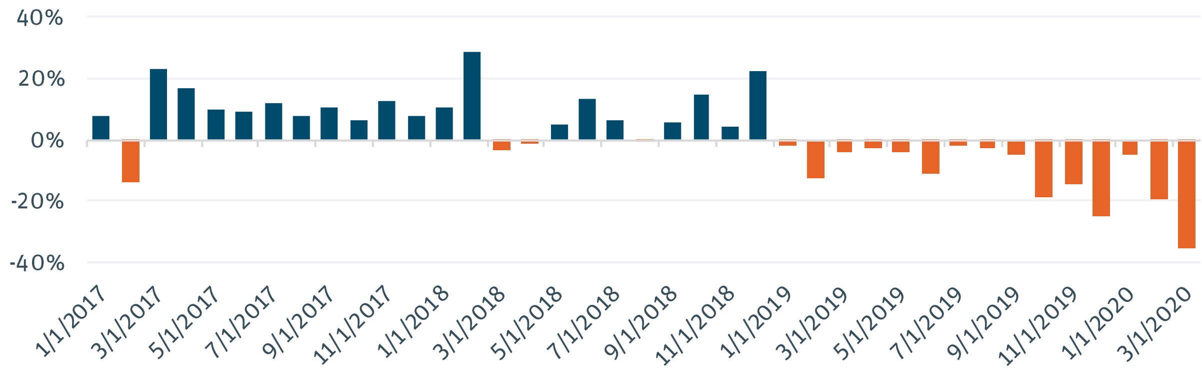
Note: 1) All figures are medians 2) Data through 4/10/2020.
Source: PitchBook, Wind and SVB analysis.

COVID-19 Accelerates Trade Shifts

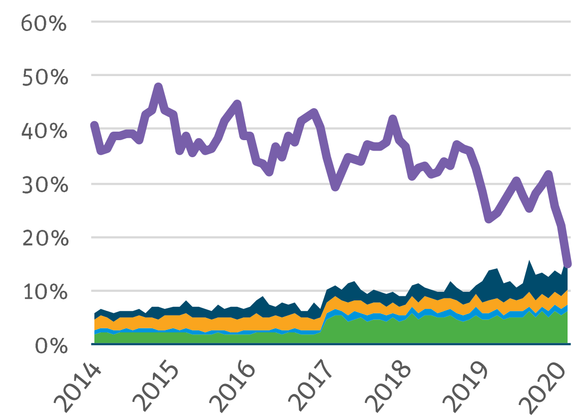
Even before the pandemic, China's share of U.S. tech imports was in decline. Shipping from China to the U.S. decreased in every month of 2019, while a handful of countries, including Vietnam and Thailand, have snatched up share of U.S. high-tech supply chains.

In February, 15% of U.S. imports underlying advanced technology were from China. This figure was as high as 48% in 2014. Anecdotally, big names in tech have shifted a portion of production elsewhere.

Total Monthly Shipments from China to U.S. (Volume TEU[1])



Share of U.S. Tech Imports[2]



Big Tech Shifting Trade

Asked major suppliers to consider moving 15–30% of iPhone production out of China.

Shifted production of cloud motherboards out of Mainland China

Shifted portion of Nintendo Switch production to Vietnam from China.

Note: 1) TEU = Twenty-Foot Equivalent Unit. 2) "Tech" products represented by Census-designated advanced technology product list.
Source: Panjiva and SVB analysis.

Appendix

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Bob Blee heads Silicon Valley Bank's Corporate Finance Group, which leads SVB's relationships with public and late-stage private companies in the Innovation sector throughout North America, providing a full suite of lending and banking products, and guidance as a trusted partner, helping our clients succeed and quickly scale.

Previously, Bob held a variety of roles in SVB's California and Midwest regions, including heading seed, early and mid-stage Infrastructure, Hardware and Consumer Internet and Fintech banking in the Bay Area and Southern California, and was responsible for SVB's Mezzanine Lending and Loan Syndications practices.

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SVB provides targeted financial services and expertise through its offices in innovation centers around the world.

With commercial, international and private banking services, SVB helps address the unique needs of innovators.

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